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Designing a Brave New World: Eugenics, Politics, and Fiction

JOANNE WOIAK

Abstract: Aldous Huxley composed *Brave New World* in the context of the Depression and the eugenics movement in Britain. Today his novel is best known as satirical and predictive, but an additional interpretation emerges from Huxley's nonfiction writings in which the liberal humanist expressed some surprising opinions about eugenics, citizenship, and meritocracy. He felt that his role as an artist and public intellectual was to formulate an evolving outlook on urgent social, scientific, and moral issues. His brave new world can therefore be understood as a serious design for social reform, as well as a commentary about the social uses of scientific knowledge.

Keywords: Aldous Huxley, *Brave New World*, eugenics, democracy, social uses of science

Aldous Huxley, writing shortly after the 1932 publication of *Brave New World*, despaired about the real-world significance of one of his novel's principal themes:

About 99.5% of the entire population of the planet are as stupid and philistine . . . as the great masses of the English. The important thing, it seems to me, is not to attack the 99.5% . . . but to try to see that the 0.5% survives, keeps its quality up to the highest possible level, and, if possible, dominates the rest. The imbecility of the 99.5% is appalling—but after all, what else can you expect?¹

1. Aldous Huxley to J. Glyn Roberts, July 19, 1933, L. J. Roberts and J. Glyn Roberts Papers, National Library of Wales. Quoted in David Bradshaw, "Introduction," *The Hidden Huxley: Contempt and Compassion for the Masses 1920–36* (London: Faber and Faber, 1994), xx.

In this letter and in the novel, Huxley linked intelligence, eugenics, and politics. He further pondered the problem of dysgenics and democracy in several published essays dating from the late 1920s and early 1930s, with titles such as “What Is Happening to Our Population?” and “Are We Growing Stupider?”² He defended the eugenic policies of encouraging higher birthrates among the “intellectual classes” and sterilizing the lower-class “unfit,” which he believed would improve the inherited mental abilities of future generations and lead to responsible citizenship.

Huxley’s interest in eugenics was more than a “brief flirtation,” as suggested by one recent biographer; on the contrary, his ongoing support for so-called race betterment was typical of left-leaning British intellectuals in the interwar period.³ His writing, including his dystopian novel *Brave New World*, reflected public anxieties about the supposedly degenerating hereditary quality of the population and how this decline would affect England’s economic and political future. For Huxley at this time in his life and in this social context, eugenics was not a nightmare prospect but rather the best hope for designing a better world if used in the right ways by the right people. This neglected aspect of his early scientific and political thinking must be taken into account when unpacking the multiple and perhaps conflicting meanings of *Brave New World*. It was simultaneously a satire on contemporary culture, a prediction of biological advances, a commentary on the social roles of science and scientists, and a plan for reforming society.

Ends and Means

As a successful novelist and a prolific “literary journalist,” Aldous Huxley contributed extensively to popularizing and critiquing modern biological science and technology. He had been born in 1894 into a scientific family—Aldous’s grandfather was T. H. Huxley (“Darwin’s bulldog”) and his younger brother was the evolutionary biologist Julian Huxley—and intended to become a medical researcher. However, this career path was scrapped after a serious eye infection at age sixteen left him with limited eyesight for the rest

2. Aldous Huxley, “What Is Happening to Our Population?” *Nash’s Pall Mall Magazine*, April 1934, reprinted in *The Hidden Huxley*, 147–58. “Are We Growing Stupider?” *Hearst*, March 30, 1932, reprinted in Aldous Huxley, *Complete Essays*, vol. 3, eds. Robert Baker and James Sexton (Chicago: Ivan R. Dee, 2001), 323–24.

3. Nicholas Murray, *Aldous Huxley, an English Intellectual* (London: Little, Brown, 2002), 200. The word “eugenics” was coined by the British polymath Francis Galton, although the eugenics movement in Great Britain was never as successful in implementing policies (or as oppressive) as it was in the United States or Germany. The literature on the history of British eugenics is extensive, but includes no investigation of Aldous Huxley’s role. The most comprehensive source on Anglo-American figures and policies is Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (Berkeley: University of California Press, 1985). An excellent overview is Diane Paul, *Controlling Human Heredity, 1865 to the Present* (Atlantic Highlands, NJ: Humanities Press, 1995).

of his life.⁴ Instead he embarked on a career as a writer, first of poetry, then reviews, then the “novels of ideas” that made his reputation during the 1920s as part of the Bloomsbury group and postwar nihilist generation.⁵ In autumn 1931, he completed “a comic, or at least satirical, novel about the Future, showing the appallingness (at any rate by our standards) of Utopia and adumbrating the effects on thought and feeling of . . . quite possible biological inventions. . . .”⁶ His title has now become an overused catch-phrase expressing society’s ambivalence towards the new genetics and its effects on human life.⁷

Brave New World is remarkable for its accurate predictions about science and technology, economics and politics, and arts and leisure. It extrapolates future applications of genetics (IVF and cloning via Bokanovsky’s Process), endocrinology (Malthusian belts), behaviorism (hypnopaedia), and pharmacology (soma). It depicts a World State in the year A.F. 632 (After Ford) where there is absolute social stability (and creative stagnation) made possible by government-controlled research in biology and psychology. Mass-produced bottle-babies are “predestined” to their future jobs using eugenic selection, cloning, and conditioning; after “decanting” from artificial wombs they are subjected to a lifetime of brainwashing techniques designed by “Emotional Engineers.” Society is strictly divided into five castes ranging from the Alpha Double Plus ruling and managerial elite to the laboring Epsilon Minus semi-morons. The extreme scenario depicted in the book—featuring totalitarianism, suppression of emotions, ignorance and apathy, rampant consumerism, and vacuous entertainments such as promiscuous sex and the “feelies”—has most commonly been read as a cautionary tale about the dehumanizing

4. The standard biography is by his friend Sybil Bedford, *Aldous Huxley: A Biography*, 2 vols. (London: Chatto and Windus, 1973–74). Dana Sawyer’s *Aldous Huxley: A Biography* (New York: Crossroad Publishing Company, 2002) emphasizes his spiritual development, while Nicholas Murray’s book reveals new details about his and his wife Maria’s sex lives.

5. “Huxley saw the intellectual climate of the interwar period as one of indecision and complexity bordering on incoherence.” Robert S. Baker, *Brave New World: History, Science, and Dystopia* (Boston: Twayne Publishers, 1990), 53. In his first three novels, Huxley caricatured the upper-middle-class lives of his friends in the Bloomsbury circle, skewered failed pre-war ideologies, and created cynical characters who served as mouthpieces for a variety of ideas. Early on he struggled to make a living as a writer and perpetually hoped to score a theatrical hit (or a Hollywood screenplay) that would free him financially from having to produce books on rigid contractual demand.

6. Aldous Huxley to Leonard Huxley, August 24, 1931, *Letters of Aldous Huxley*, ed. Grover Smith (London: Chatto and Windus, 1969), 351.

7. Techno-enthusiasts who have borrowed the ubiquitous title: Roger Gosden, *Designing Babies: The Brave New World of Reproductive Technology* (New York: W. H. Freeman and Company, 1999); Lee M. Silver, *Remaking Eden: Cloning and Beyond in a Brave New World* (New York: Avon Books, 1997). Critics of biotechnology on the right and left: Leon Kass, “Preventing a Brave New World,” *Human Life Review* 27 (Summer 2001), 14–35; Bryan Appleyard, *Brave New Worlds: Staying Human in the Genetic Future* (London: HarperCollins, 1999). Another example: George W. Bush, in his August 2001 speech limiting funding for embryonic stem cell research, warned: “We have arrived at that ‘Brave New World’ that seemed so distant in 1932, when Aldous Huxley wrote about human beings created in test tubes.” Kevin Canfield, “Is Dubya a Huckster for Huxley?” *Hartford Courant*, August 16, 2001, D1, ProQuest, University of Washington, August 13, 2006.

effects of technology and the growing influence of cultural trends that Huxley abhorred.

Since the mid-1990s, however, several leading Huxley scholars have delved beyond the usual satirical readings of *Brave New World* to reveal more ambiguous elements in the text. Emphasizing contextual readings, they explore the author's interests and possible intentions at the time he composed it.⁸ We now know that there was considerable cross-fertilization between Huxley's fiction and nonfiction writing, the latter in the form of books of lively essays and frequent contributions to magazines and newspapers in England and America. This paper contributes to the revival of Huxley research led by David Bradshaw, James Sexton, and Robert Baker, who have edited and interpreted his essays from the 1920s and 30s. They depict a "hidden Huxley" who early in his literary career was an elitist technocrat and eugenicist, influenced by H. L. Mencken and H. G. Wells. This contrasts sharply with his later personae of progressive humanist, pacifist, and spiritualist. This rather unflattering re-evaluation of the author of *Brave New World* generated some initial excitement in academia and the media; subsequently, however, some scholars and biographers have tried to downplay the significance of this brief antidemocratic period in his life. Because this period coincides with the composition of his most famous and enduring fictional work, it surely deserves greater scrutiny in both academic and public discourses.

Proper attention to Huxley's nonfiction works has enriched our understanding of the progress of his thinking on many political, sociological, philosophical, and scientific issues, which he felt it was his responsibility to engage with as a "man of letters." Huxley used literature and popular essays to educate his audiences, especially regarding science and technology, which were impinging more and more on people's lives for better or worse.⁹ He sought to

8. This paper is most heavily indebted to David Bradshaw's approach and insights, especially his "Huxley's Slump: Planning, Eugenics, and the 'Ultimate Need' of Stability," in *The Art of Literary Biography*, ed. John Batchelor (New York: Oxford University Press, 1995), 151–71, and his introductory articles in *The Hidden Huxley*. Other scholars who have re-assessed Huxley's fiction in the light of his nonfiction writing are James Sexton and Robert Baker, the editors of the six-volume *Complete Essays*. Sexton is also the editor of *Aldous Huxley's Hearst Essays* (New York: Garland Publishing, 1994), which were written for the Hearst newspaper chain in the 1920s and 30s and brought much-needed income. Bradshaw's claims that the planning and eugenics essays reveal the true nature of Huxley's interests in the period around 1930 have been criticized to some extent by reviewers, but all agree that he has pointed us to a fuller understanding of Huxley's mixed motives in *Brave New World*. See for instance Robert Baker's review of *The Hidden Huxley* in *CLIO* 25 (Spring 1996): 293, *Expanded Academic ASAP*, University of Washington, August 15, 2006. Some of the scholarly reassessments and disagreements that have emerged since the Huxley centennial in 1994 are also addressed in David King Dunaway, *Aldous Huxley Recollected: An Oral History* (New York: Carroll and Graf, 1995).

9. "I feel strongly that the man of letters should be intensely aware of the problems which surround him, of which technological and scientific problems are the most urgent. It is his business to communicate his awareness and concern. Literature sets up a vision of man which guides people to a better understanding of themselves and their world." *Aldous Huxley, 1894–1963: A Memorial Volume*, ed. Julian Huxley (New York: Harper and Row, 1965), 100. He once described his profession as "an essayist who sometimes writes novels and biographies." Murray, *Aldous Huxley*, 161.

develop his own “outlook” or philosophy of life, which over the course of his career ranged from cynical to technocratic to mystical. Through it all he maintained the importance of art and artists for both understanding human life and helping to improve it. “How then must we live?” was his perennial question.¹⁰

During the interwar period to be discussed here, a principal aspect of Huxley’s “outlook” was his support for the science of eugenics. He believed that human life would be improved by increasing the innate intellectual abilities of the population. This paper expands on the “hidden Huxley” scholarship by exploring in greater depth the content of and inspiration for his eugenic pronouncements. His eugenics was consistent with the predominant or “main-line” trend in both England and the United States to focus on the problem of “feeble-mindedness.” American rhetoric emphasized the escalating costs of custodial care, while the psychologists who pioneered mass IQ testing raised alarms that Army recruits had an average mental age of only 13 years. Given this low standard, they wondered, “is America safe for democracy?”¹¹ In the British case, 1913 legislation produced tens of thousands of “mentally deficient” wards of the state, who in turn became the subject of debates by middle-class eugenicists over how to prevent them from becoming paupers or criminals and how to check their fertility lest they transmit their hereditary taint.¹² Eugenicists in both countries assumed a strict division between the socio-economic classes in terms of mental and moral qualities.¹³ An exaggerated version of this class division appeared in Huxley’s fictional society featuring superior Alphas and impaired Epsilons.

Huxley’s notions about race betterment also conformed to what historian Daniel Kevles has labeled “reform eugenics,” a moderate doctrine promoted by left-wing scientists who repudiated race-based policies but continued to advocate for the eugenic superiority of the professional middle class.¹⁴ So for instance as early as 1934, Huxley condemned the ideology of Nordic superiority put forward by extremist American eugenicists and Nazi race theorists, while as late as 1958, he was still claiming that the “congenitally insufficient” were breeding more quickly than “our best stock.”¹⁵ Huxley’s eugenic writ-

10. Murray, *Aldous Huxley*, 169.

11. James Trent, *Inventing the Feeble Mind: A History of Mental Retardation in the United States* (Berkeley: University of California Press, 1994); Stephen Jay Gould, *The Mismeasure of Man* (New York: W. W. Norton, 1996), 252.

12. Mathew Thomson, *The Problem of Mental Deficiency: Eugenics, Democracy, and Social Policy in Britain, c. 1870–1959* (Oxford: Clarendon Press, 1998).

13. Among the more politically progressive British eugenicists was Huxley’s brother Julian, who in 1931 voiced typical class-based fears about the high fertility and poor genetic quality of slum dwellers. He proposed that unemployment relief should be given only to those men who promised not to have any more offspring, because of the tendency “for the stupid to inherit the earth, and the shiftless, and the imprudent, and the dull.” Quoted in Gary Werskey, *The Visible College: A Collective Biography of British Scientists and Socialists of the 1930s* (London: Allen Lane, 1978), 42.

14. Kevles, *In the Name of Eugenics*, 164–75.

15. Aldous Huxley, *Brave New World Revisited* (New York: Harper and Row, 1958), 18–21; “The Double Crisis,” in *Themes and Variations* (1950), reprinted in *Complete Essays*, vol. 5, 124–

ing provides a prominent example of how diverse and complex the early-twentieth-century eugenics movement actually was. As recent international comparative scholarship has illustrated, eugenics took on many different forms depending on what theories of heredity, “unfit” groups, and social reforms were emphasized in specific contexts. Even within any one country, several variants of eugenics usually co-existed or even competed.¹⁶

Today the public’s historical memory of eugenics is largely limited to the atrocities committed in the name of Nazi racial hygiene; hence readers of *Brave New World* are unlikely to recognize the novel’s bizarre scenario as an expression of particular Anglo-American eugenic concerns and policies. Huxley further serves as an example of how intellectuals from all points on the political spectrum—not just conservatives or fascists—were drawn to eugenics as a progressive, technocratic means of improving the health and fitness of populations. His own political leanings were decidedly leftist: he grew up in a free-thinking family, and in 1926 when interviewed about the General Strike professed his “prejudices” to be “Fabian and mildly labourite.”¹⁷ During this early period of his career, Huxley was also close to a group of prominent Cambridge scientists who were outspoken socialists and reform eugenicists: these included the geneticist J. B. S. Haldane, physicist J. D. Bernal, chemist Joseph Needham, and on the periphery, philosopher Bertrand Russell.¹⁸

Brave New World was partly shaped by the interwar preoccupations of this “scientific Left,” who supported schemes for Soviet-style planning and eugenics policies in Britain. The revisionist Huxley scholarship has fully explored his involvement in the planning movement, but not given adequate attention to the influence of relevant scientific ideas and sources. In the broadest terms, *Brave New World* is about the relationship between science and society. Huxley was asking: how can scientific knowledge and technologies be used to improve human life, and in particular to create well-ordered states out of the perceived social and economic chaos of postwar Europe? Huxley’s circle of planners, eugenicists, and socialists all strongly believed in the power of science as the means to achieve social progress. The techniques of biological and psychological engineering so notoriously predicted in the novel, along with its overall theme of the uses and abuses of science, had previously been the

45; “Race,” *The New Statesman and Nation*, May 9, 1936, *Complete Essays*, vol. 4, 131–33. Here his message about racial differences was more ambiguous: “It is obvious that there is a certain correlation between lack of success in the social struggle and lack of intelligence. The thing that immigration officers should discriminate against is not race (except in those cases where miscegenation leads to biologically undesirable results), but stupidity. A country’s first need is good brains, not blue eyes.” “Racial History,” *Hearst*, Feb. 7, 1934, *Complete Essays*, vol. 3, 377–78.

16. Mark Adams, ed., *The Wellborn Science: Eugenics in Germany, France, Brazil, and Russia* (New York: Oxford University Press, 1990); Joanne Woiak, “Drunkenness, Degeneration, and Eugenics in Britain, 1900–1914” (Ph.D. diss. University of Toronto, 1998).

17. Murray, *Aldous Huxley*, 181.

18. This group is the subject of Werskey, *Visible College*. On their “unswerving commitment to science” and their promotion of Soviet scientific planning during the early 1930s, see especially 176–211.

subjects of popular books by Haldane, Russell, and Bernal. All championed the “scientific outlook,” yet queried whether current political and moral systems were adequate to ensure that science would serve the well-being of the masses and not just the capitalists. In particular, Haldane’s short 1923 text *Daedalus, or Science and the Future*, deserves more attention as the main inspiration and model for Huxley’s fictional scientific society.¹⁹

Daedalus described several “perverse” but foreseeable advances in biological knowledge and its applications, including hormonal birth control, in vitro fertilization (IVF), and ectogenesis. Haldane’s purpose had been to inform and amuse (or shock) his audience with these prophecies about scientifically managed human reproduction. His tone was essentially sanguine: he validated the wisdom and benevolence of future scientists who would guide society towards technological achievements, eugenic perfection, and moral revolution. A decade later *Brave New World* would address the same dilemmas: how is scientific knowledge to be used, who should control it, and do the ends always justify the means? Given the context in which it was composed, Huxley’s story can be read as resolving these issues in a relatively optimistic way. Oppressive methods—such as compulsory genetic manipulation—had been necessary and tolerable in order to achieve the desired goal of social and economic stability. Rule by meritocracy—the enlightened World Controllers of A.F. 632—was the best alternative after democracy had failed. And a stratified and soulless society was a less horrifying scenario than a country exclusively composed of low-functioning Epsilons.

Brave New World is a remarkably rich text, open to many legitimate and edifying interpretations. Initial reviews were mostly negative, criticizing its weak characterization and plot, or dismissing the satire as “a thin little joke.” Various readers objected to its grim rendering of human nature; tone of resignation; disgusting portrayal of sex, reproduction, and child-rearing; and devastating anti-science worldview. On the other hand, some evidently “concluded that Huxley approved of his horrible creation.”²⁰ Among the few contemporaries who grasped the novel’s complicated messages about science were members of the scientific Left. Russell read the World State as a viable alternative to mass destruction in a future world war, and was going to title his review “A Manipulator’s Paradise.” Needham argued that the book very accurately pre-

19. J. B. S. Haldane, *Daedalus, or Science and the Future* (1923; New York: E. P. Dutton and Company, 1924), 63–67; Bertrand Russell, *The Scientific Outlook* (London: W. W. Norton, 1931); J. D. Bernal, *The World, the Flesh, and the Devil: An Enquiry into the Future of the Three Enemies of the Rational Soul* (New York: Kegan Paul, Trench, Trubner, 1929). On the sources of and reactions to Haldane’s book, see Jon Turney, *Frankenstein’s Footsteps: Science, Genetics and Popular Culture* (New Haven: Yale University Press, 1998), 91–120; Susan Merrill Squier, *Babies in Bottles: Twentieth-Century Visions of Reproductive Technology* (New Brunswick, NJ: Rutgers University Press, 1994), 63–99; and K. R. Dronamraju, ed., *Haldane’s Daedalus Revisited* (New York: Oxford University Press, 1995).

20. Donald Watt, ed., *Aldous Huxley: The Critical Heritage* (Boston: Routledge and Kegan Paul, 1975), 15–18 and 197–221. Huxley’s reputation was on the rise in the early 1930s, and *Brave New World* sold well.

dicted how biology and psychology could soon alter human life, and advised that people needed to decide now whether this power should be put in the hands of dictators.²¹

In America in 1934, pioneering research on assisted reproduction in rabbits was heralded in the *New York Times* as the work of a real-life Bokanovsky.²² Yet it was not until human IVF became a reality in the 1970s that *Brave New World* gained cultural cachet as a cautionary or antiscience tale. The first generation of professional bioethicists, such as Leon Kass and Paul Ramsey, renewed interest in the novel's extreme scenario and used it to support their slippery slope argument that IVF would inevitably lead to eugenic cloning.²³ Because it now serves as a widely shared reference point (or shorthand) for bioethics discussions, there seems to be little interest in re-evaluating the novel from the perspective of its own cultural context. However, it is such a ubiquitous text that more nuanced readings in the classroom and other public forums would certainly be valuable. Fiction can help to create public memory about the popularity, diversity, and legacy of the historical eugenics movement, and it can stimulate critical thinking about the social role of science in the past, present, and future.

Planning and Meritocracy

David Bradshaw's research on the role of planning and eugenics in the brave new world has shown that while the novel may indeed function as a commentary on dictatorship and its oppressive uses of science, Huxley himself, at least for a short time around 1930, was rebuking not the dictators but rather the masses. "The legendary liberal-humanist does not emerge unscathed from these pages."²⁴ Huxley as a social commentator and product of the intellectual upper-middle class expressed both "contempt and compassion" for the workers and the poor during the British economic crisis of the late 1920s and early 1930s. In 1931, he went "sight-seeing in the alien Englands of manual labour and routine," namely the Durham coalfields. He witnessed the effects of high unemployment and monotonous work (including the assembly line method introduced by one of his favorite satirical targets, Henry Ford), and, like George Orwell later in *The Road to Wigan Pier*, sang the praises of the laboring man and lamented his oppression: "In our admiration for the planning mind, let us not forget the body, without whose aid none of the plans could be put into execution."²⁵

21. *Ibid.*, 202–5 and 210–12.

22. Turney, *Frankenstein's Footsteps*, 117.

23. Robin Marantz Henig, *Pandora's Baby: How the First Test Tube Babies Sparked the Reproductive Revolution* (Boston: Houghton Mifflin, 2004), 64–77.

24. Bradshaw, "Introduction," *Hidden Huxley*, xxiii.

25. Aldous Huxley, "Sight-Seeing in Alien Englands," *Nash's Pall Mall Magazine*, June 1931, *Hidden Huxley*, 71.

Huxley despaired of the unrewarding work and low-brow entertainments to which the masses—especially in the United States—were subjected. Americans “can live out their lives,” he said in 1927 after a tour of the country, “without once being solitary, without once making a serious mental effort, without once being out of sight or sound of some ready-made distraction.”²⁶ His bitterness about popular culture—cheap, uncreative, and effortlessly available—translated into his brave new world’s insistence on “no leisure from pleasure”: feeling pictures, synthetic music from sexophones, and Centrifugal Bumblepuppy, among other mindless and standardized diversions.²⁷ In newspaper and magazine articles intended to be read by the masses themselves, he identified universal leisure and factory drudgery as major causes of their mental deterioration.

But at the same time, Huxley voiced opinions about the supposedly widening gulf between cultured brain workers and uncultured manual workers that illustrated his affinity with hereditarian Anglo-American eugenicists. He despaired of the innate cognitive capacities and reproductive rates of the comfort-seeking masses:

How do they expect democratic institutions to survive in a country where an increasing percentage of the population is mentally defective? Half-wits fairly ask for dictators. Improve the average intelligence of the population and self-governance will become, not only inevitable, but efficient.²⁸

Such rhetoric was fueled in part by Huxley’s friendship with H. L. Mencken, the American journalist and notorious misanthrope.²⁹ Both men skewered the incompetence of political leaders and the follies of the common people. Huxley repeatedly rejected the “Enlightenment” notion of the “congenital equality of man.”³⁰ The allusion above to “half-wits” and dictators clearly recalls his novel published two years earlier. The fictional Epsilons represent in extreme form his fears about biological decay and the end of democracy. But on the

26. Aldous Huxley, “The Outlook for American Culture: Some Reflections on a Machine Age,” *Harper’s Magazine*, August 1927, *Complete Essays*, vol. 3, 187. “All the resources of science are applied in order that imbecility may flourish and vulgarity cover the whole earth. That they are rapidly doing so must be obvious to anyone who glances at a popular picture paper, looks at a popular film, listens to popular music on the radio or phonograph” (188–89).

27. Aldous Huxley, *Brave New World* (1932; New York: Perennial Classics, 1998), 55.

28. Huxley, “What is Happening to Our Population?” 154.

29. David Bradshaw, “Chroniclers of Folly: Huxley and H. L. Mencken 1920–26,” in *Hidden Huxley*, 1–30.

30. Aldous Huxley, “The Idea of Equality,” in *Proper Studies* (Garden City, NY: Doubleday, Doran and Company, 1928), 23–55. His fascination with classifying and ranking people—especially according to inborn mental abilities—shaped his skepticism about democracy. He suggested there ought to be IQ tests to determine who should run for office or even be allowed to vote, and tried to delineate the “varieties of intelligence.” *Proper Studies*, 56–120 and 195–204. This tendency to categorize must also have attracted him in the 1940s to the theories of William H. Sheldon, on body types and personalities, as a new explanation of human nature. Sawyer, 102–3. He used Sheldon’s scheme in “Inequality,” *Ends and Means: An Inquiry into the Nature of Ideals and into the Methods Employed for Their Realization* (New York: Harper and Brothers, 1937), 185–203.

other end of the fictional social ladder, the production of Alphas resembled the “special breeding and training of a small caste of experts” that the technocratic Huxley hoped would take power in England and implement “scientific” government. The alternative would be to let a totalitarian regime forcefully enact more extreme reforms to rescue the nation from the Depression.³¹

Huxley stated exactly this argument in “Science and Civilisation,” a radio address broadcast on the BBC two weeks before the publication of *Brave New World*. The timing was clearly deliberate. Later he told a journalist that he favored neither the conditioned stability of the novel’s World State nor the outsider John Savage’s desire for “freedom to be unhappy.” Instead there had to be a workable compromise between the two extremes, and until that was found “our efforts might have to be limited to the training of an intellectual aristocracy.”³² It seems therefore that the novel’s rigid biological caste differentiation is open to conflicting interpretations. It could be parodying the eugenicists’ hereditarian beliefs about a hierarchy of ability correlated with social class, or it could be a blueprint for how to build a relatively desirable society using selective breeding. As we shall see, the second reading more closely fits Huxley’s own public positions on the eugenics issue.

Huxley professed that his initial motivation for composing *Brave New World* had been simply to parody H. G. Wells and the “horrors” of his utopias.³³ Huxley’s specific target was the 1923 novel *Men Like Gods*, which seemed to him naively optimistic in its predictions of a “scientific state” that controlled eugenics and education. For Wells, the success of this system was due to an “unconscious cooperation by a common impulse.”³⁴ Huxley thought this scenario was founded on flawed assumptions about human nature, and his critique of it from this 1927 essay about eugenics would carry over into *Brave New World*:

But if, as would be the case in a perfectly eugenized state, every individual is capable of playing the superior part, who will consent or be content to do the dirty work and obey? The inhabitants of one of Mr. Wells’s numerous Utopias solve the problem by ruling and being ruled, doing high-brow and low-brow work, in turns. While Jones plays the piano, Smith spreads the manure. . . . An admirable state of affairs if it could be arranged. . . . States function as smoothly as they do because the greater part of the population is not very intelligent, dreads responsibility, and desires nothing better than to be told what to do. . . .

31. Aldous Huxley, “Science and Civilisation,” broadcast on the BBC National Programme, January 13, 1932, published twice thereafter, and reprinted in *Hidden Huxley*, 112.

32. Interview published in Alan Campbell Johnson, *Peace Offering* (London: Methuen, 1936), 152–64, quoted in David Bradshaw, “Open Conspirators: Huxley and H. G. Wells 1927–35,” in *Hidden Huxley*, 41.

33. Murray, *Aldous Huxley*, 249; Bradshaw, “Open Conspirators,” 31. In his lengthy career Wells published numerous utopian and dystopian stories, beginning with *The Time Machine* in 1895.

34. Baker, *Brave New World*, 25 and 33. Huxley also borrowed ideas from Wells’s 1899 dystopia *When the Sleeper Wakes*. Peter Fircchow, *The End of Utopia: A Study of Aldous Huxley’s Brave New World* (Lewisburg, PA: Bucknell University Press, 1984), 63–64.

A state with a population consisting of nothing but these superior people could not hope to last a year. The best is ever the enemy of the good. If the eugenists are in too much of an enthusiastic hurry to improve the race, they will only succeed in destroying it.³⁵

Likewise in the novel, the visitor from the Reservation, John Savage, is appalled by the twinned and degenerate Bokanovsky Groups he sees in London, and wonders, “why don’t you make everybody an Alpha Double Plus while you’re about it?”³⁶ In response, World Controller Mustapha Mond explains to him the “Cyprus experiment” of 200 years before, in which a colony of well-bred Alpha individuals (Huxley’s eugenically fit professional middle class) had slid into civil war because everyone refused to do the needed farming and factory work. According to Mond, the only workable alternative for creating a stable, utopian world is to engineer inferior castes of menial workers and slavish consumers—the eight-ninths of the metaphorical iceberg that happily lives below the water line and keeps the world running efficiently. To aim for total human perfectibility would not produce “community, stability, identity.”

Wells was not amused by Huxley’s dysgenic vision and accused him of “treason to science and defeatist pessimism.”³⁷ Yet Huxley was in other ways very sympathetic to Wells’s utopian ideals. Both were enthusiastic about what Wells in 1928 labeled the “Open Conspiracy”: the eventual rejection of failed democratic systems and the establishment of a world government to be managed by a scientifically trained elite.³⁸ *Men Like Gods* imagined a “free association of men and women, who, as a consequence of their enlightened education, voluntarily submit to the guidance of experts,” while *Brave New World* presented a darker vision of citizens programmed into subservience to the Alpha Double Plus World Controllers.³⁹ Huxley first espoused such a Wellsian political system as a serious alternative to democracy in his 1927 article for *Harper’s* called “The Outlook for American Culture”:

The ideal state is one in which there is material democracy controlled by an aristocracy of the intellect. . . . The active and intelligent oligarchies of the ideal state do not yet exist. But the Fascist party in Italy, the Communist party in Russia, the Kuomintang in China are still their inadequate precursors.⁴⁰

35. Aldous Huxley, “A Note on Eugenics,” in *Proper Studies*, 329–30.

36. Huxley, *Brave New World*, 222–24.

37. Sawyer, *Aldous Huxley*, 84; and Firchow, *End of Utopia*, 59. Similarly, “in Cannes, we saw H. G. Wells who, I fear, wasn’t pleased with it. On the contrary (surprisingly enough) Edith Wharton is enthusiastic.” Huxley to Harold Raymond, 19 March 1932, *Letters*, 358–59.

38. Bradshaw, “Open Conspirators,” 33. Before WWI, Wells had been briefly associated with the socialist Fabian Society, the first champions of scientific planning. He inscribed a copy of his 1928 book *The Open Conspiracy: Blue Prints for a World Revolution* to Huxley. See G. R. Searle, *The Quest for National Efficiency: A Study in British Politics and Political Thought, 1899–1914* (Berkeley: University of California Press, 1971); and Donald Mackenzie, “Eugenics in Britain,” *Social Studies of Science* 6 (1976): 499–532.

39. Baker, *Brave New World*, 34.

40. Huxley, “Outlook for American Culture,” 191–92. Another optimistic technocrat who moved in the same social circles was Bertrand Russell. His 1931 *The Scientific Outlook* had much

Rule by meritocracy and the virtues of a scientifically planned state were major themes of several articles Huxley published during the period of the economic slump in England (around 1925–1935), which have been analyzed by Bradshaw in order to show the origins of key ideas he explored in his fiction.⁴¹

Reacting to the collapse of British export trade in coal and cotton, escalating unemployment, the abandonment of the gold standard, the failure of the 1929 Labour and 1931 National governments to resolve the economic crisis, and the emergence of Oswald Mosley's fascist agenda as a seemingly rational alternative, by mid-1931 Huxley had added his voice to the movement for "rationalization" of industry and government.⁴² Writing in *Nash's Pall Mall Magazine*, he made the case for government by efficiency experts "capable of acting swiftly and with a well-informed and intelligent ruthlessness," who could regulate and coordinate industry, commerce, finance, and agriculture.⁴³ He joined the short-lived, politically diverse pressure group for Political and Economic Planning. Like many European liberals at this time, he was briefly seduced by both Stalin's Five-Year Plan and Mosley's plan for a "strong executive" and radical economic reorganization. Britain needed to impose these kinds of solutions quickly, regardless of whether they would be constitutional.⁴⁴ By the end of the year Huxley was sounding even more desperate:

We may either persist in our present course, which is disastrous, or we must abandon democracy and allow ourselves to be ruled dictatorially by men who will compel us to do and suffer what a rational foresight demands.⁴⁵

in common with Huxley's work regarding the political and ethical consequences of science, and both men thought the Soviet Union was a good prototype for the future planned state. Critics disagree as to who borrowed from whom. Baker, *Brave New World*, 63–76.

41. Bradshaw, "Huxley's Slump: Planning, Eugenics, and the 'Ultimate Need' of Stability," 155–57. A useful analysis of the "planning movement" at the time of the slump is Greta Jones, *Social Hygiene in Twentieth Century Britain* (London: Croom Helm, 1986), 113–36. On the broader European antidemocratic impulses of the interwar period, see Mark Mazower, *Dark Continent: Europe's Twentieth Century* (New York: Alfred A. Knopf, 1999).

42. On the slump, see for example Peter Clarke, *Hope and Glory: Britain 1900–1990* (New York: Penguin, 1996), 144–81; Keith Laybourn, *Britain on the Breadline: A Social and Political History of Britain Between the Wars* (Wolfeboro Falls, NH: Alan Sutton, 1990).

43. Aldous Huxley, "The Victory of Art over Humanity," *Nash's Pall Mall Magazine*, July 1931, *Hidden Huxley*, 83.

44. Aldous Huxley, "Abroad in England," *Nash's Pall Mall Magazine*, May 1931, *Hidden Huxley*, 63. He often mentioned his reading of the proto-fascist sociologist Vilfredo Pareto, on the superiority of a governing elite willing to use force. Bradshaw, "Introduction," *Hidden Huxley*, xii and xviii. James Sexton notes that *Brave New World* is a "projection of the kind of society advocated by Mosley on the right and, to a lesser degree, by Wells . . . on the liberal side of the political spectrum." "Introduction," *Aldous Huxley's Hearst Essays*, xix. In May 1931, Aldous and Julian intended to make a trip to the Soviet Union, but Aldous backed out because he was trying to finish his novel. Bradshaw, "Huxley's Slump," 160–61.

45. Aldous Huxley, "Forewarned is not Forearmed," *Chicago Herald and Examiner*, Nov. 18, 1931, quoted in Bradshaw, "Huxley's Slump," 163. When he joined the "Next Five Years Group" in 1936 he was still skeptical that its "noble ideal" of democratically controlled planning could work. Huxley, "A Horrible Dilemma," *Time and Tide*, March 14, 1936, *Hidden Huxley*, 210–14.

This solemn prediction of the end of democracy eerily echoes the fictional World State he was inventing at that exact moment.

Huxley's favorite model of successful planning was the work of Alfred Mond, the industrialist who in 1926 had amalgamated and rationalized the major British chemical companies.⁴⁶ Not by coincidence is the benevolent scientific dictator in *Brave New World* named Mustapha Mond. As Bradshaw notes, Mond is granted the most compelling viewpoint in the novel and thus seems to represent Huxley's genuine admiration for scientifically minded leaders who could help pull the nation out of the slump.⁴⁷ But as James Sexton demonstrates, *Brave New World* simultaneously satirizes the "rationalizing" impulses of the real world Alfred Mond and Henry Fords.⁴⁸ Did their use of science and technology truly serve the public good, or did it entail undesirable consequences? The modern production methods of the assembly line and Taylorism are mirrored in the cloned and stunted Epsilon bodies and minds: designed for maximum efficiency and minimum humanness, they represent "the total sacrifice of individual interests to the interests of the mechanized community."⁴⁹ The planned economy of the World State had solved the problems of unemployment and overproduction in a fashion that Huxley was clearly mocking. Compulsory consumption of goods was inculcated from birth via sleep-teaching and propaganda slogans:

In the nurseries . . . the voices were adapting future demand to future industrial supply. 'I do love flying,' they whispered, 'I do love having new clothes'. . . . 'Ending is better than mending, ending is better than mending' . . .⁵⁰

Likewise in "Science and Civilisation" Huxley voiced dismay at the possibility that "a government of industrialists and financiers" would find it in their own best interests "to train up a race, not of perfect human beings, but of perfect mass-producers and mass-consumers."⁵¹

46. Mond's "great Imperial Chemical Industries factory is one of those ordered universes that exist as anomalous oases of pure logic in the midst of the larger world of planless incoherence." Huxley, "Sight-Seeing in Alien England," 67–68. In "Victory of Art over Humanity," he likewise championed the "efficient and progressive" coordination of the docks under the London Port Authority. See also David Bradshaw and James Sexton, "Introduction," in Aldous Huxley, *Now More Than Ever* (Austin: University of Texas Press, 2000), xxi–xxiv. *Now More Than Ever* was a play (unpublished and unproduced at the time) written in September 1932 while Huxley was still fascinated with the planning issue. The protagonist is a financier who tragically fails to rescue the iron and steel industry from dishonest speculators.

47. Bradshaw, "Huxley's Slump," 161.

48. James Sexton, "Brave New World and the Rationalization of Industry," in *Critical Essays on Aldous Huxley*, ed. Jerome Meckier (New York: G. K. Hall, 1996), 88–102. Alfred Mond defined "rationalization" as "the application of scientific organization to industry, by the unification of the processes of production and distribution with the object of approximating supply to demand" (93).

49. Aldous Huxley, "Machinery, Psychology and Politics," *The Spectator*, Nov. 23, 1929, *Complete Essays*, vol. 3, 219.

50. Huxley, *Brave New World*, 48–49.

51. Huxley, "Science and Civilisation," 108. He also pilloried how consumerism fostered stupidity in the hilarious "Foreheads Villainous Low," in *Music at Night* (Garden City, NY: Doubleday Doran and Company, 1931), 179–87.

Eugenics and Citizenship

For the scientists and science popularizers in the planning movement, such as H. G. Wells, Bertrand Russell, and Aldous and Julian Huxley, “biological engineering” was a crucial component of their project.⁵² What were their ideas about eugenic reform? How did Aldous Huxley’s beliefs relate to the rest of the British eugenics movement? And how does this complicate our understanding of *Brave New World*? Many readers of Huxley’s story probably assume that he was wholly critical of eugenics, given the way he presents gamete selection, embryo cloning, and artificial wombs as techniques for eliminating individuality and meaningful personal relationships.⁵³ That extreme version of eugenics (and the behavioral conditioning that goes along with it) was obviously being ridiculed. But Huxley the public intellectual was a known supporter of the eugenics movement. He held hereditary beliefs regarding the causes of social ills and especially mental abilities, and his notions about who should and should not be allowed to reproduce discriminated against disabled people and the lower social classes. His first treatment of the eugenics issue was in 1927’s “Outlook for American Culture,” where he attacked mechanization of work and leisure as a leading cause of increasing “imbecility” in America. This discussion led him to claim further that some percentage of the masses already had a hereditary constitution at “lower, animal levels” that made them unable to appreciate the higher arts. He predicted that a new form of democracy was on the horizon, which would reject the false belief that everyone is “equally endowed with moral worth and intellectual ability.” Society would instead be based on a “more natural hierarchy” of inherited traits, with people divided up into “psychological types” and given appropriate education and jobs.⁵⁴

Although Huxley never joined the Eugenics Society (ES), the propagandizing arm of the British eugenics movement, he became very familiar with its rhetoric and policy proposals and began incorporating these into his articles.⁵⁵ His contempt for the masses and assumption that societies will always have innately inferior and superior groups fit closely with “mainline” eugen-

52. Bradshaw, “Huxley’s Slump,” 163–64.

53. This is the most common message that my students seem to get out of the novel. After all, the title is meant to be ironic. In particular, the character John Savage speaks for the readers’ “horror and disgust” at biotechnologies that produce dehumanization: “The nightmare of swarming indistinguishable sameness. Twins, twins. . . . Like maggots they had swarmed defilingly over the mystery of Linda’s death. Maggots again, but larger, full grown, they now crawled across his grief and his repentance. . . . ‘How many goodly creatures are there here!’ The singing words mocked him derisively. ‘How beauteous mankind is! O brave new world. . . .’” Huxley, *Brave New World*, 209.

54. Huxley, “Outlook for American Culture,” 187 and 193.

55. Bradshaw, “Huxley’s Slump,” 164. He could not be active in British eugenics organizations because he lived in Italy and France during most of this period, and then moved his family permanently to California in 1937. After that he became deeply involved in spiritualism (the Huxley of 1954’s *Doors of Perception*), and his biographers do not mention anything about contact with eugenics groups.

ics ideology prior to World War II.⁵⁶ He expounded standard arguments about the “differential fertility” of the professional classes *versus* the unskilled laborers and unemployed, who were said to make up the lowest 10 percent of the social ladder.⁵⁷ “A Note on Eugenics” (1927) is especially significant because it tied mainline eugenic notions to the “Wellsian paradise” that would influence *Brave New World*. The essay ended with the warning that a eugenically perfect society could never function because all the citizens would be “malcontents.” But it also explored the consequences of failure to implement eugenic reforms: what would happen if the majority became Epsilons? They would quickly be conquered by rival nations.⁵⁸ Perhaps he therefore intended the *Brave New World* scenario as a middle ground: a community of contented imbeciles governed by a relatively benign aristocracy of intellect.

In three volumes of essays published between 1925 and 1929, Huxley began to struggle with the questions that would guide all of his subsequent writing and philosophizing. How should we live? How can we achieve the ideal of a “perfected humanity” given the limitations of human nature?⁵⁹ “A Note on Eugenics” entertains several policy proposals but endorses none of them, typical of his 1920s nihilist phase. As of 1931, he was still pessimistic about achieving absolute happiness and an “egalitarian world,” though he did admit at least the hope that “the heritable qualities of the progressing population shall be improved . . . by deliberate breeding; and the amount of population shall be reduced.”⁶⁰ As the economic slump worsened, however, Huxley’s tone shifted dramatically. The 1932 Hearst newspaper article “Are We Growing Stupider?” answers that question definitively. “Moral: let us take steps to prevent our supply [of intelligent citizens] from running short.”⁶¹ Sociological studies

56. “Mainline eugenics” is the term used by Kevles and other historians to distinguish the most common form of eugenics thinking from later “reform eugenics” and other variants such as “preventive eugenics” (which said that germ plasm had to be protected from deleterious environmental influences such as alcohol or venereal disease). In Britain, mainline eugenics was dominated by the research on hereditary causation carried out at the Galton Eugenics Laboratory, led by the statistician Karl Pearson and later the geneticist R. A. Fisher. Their work correlated “anti-social” traits and fertility rates with economic status. See Kevles, *In the Name of Eugenics*, 20–40. In my dissertation, “Drunkenness, Degeneration, and Eugenics in Britain, 1900–1914,” I explored the conflict between the mainline Eugenics Lab and the “preventive” eugenics camp (led by the physician Caleb Saleeby) over the eugenic significance of alcoholism.

57. The other “mainline” eugenics group—which provided Huxley with the material for these class-biased claims—was the leadership of the Eugenics Society during the 1910s and 20s. On differential fertility Huxley also cited R. A. Fisher’s research, which is analyzed by Pauline Mazumdar, *Eugenics, Human Genetics and Human Failings: The Eugenics Society, its Sources and its Critics in Britain* (New York: Routledge, 1992), 96–145.

58. Huxley, “A Note on Eugenics.”

59. *Those Barren Leaves* (1925), *Proper Studies* (1927), *Do What You Will* (1929). See Murray, *Aldous Huxley*, 169, 205, and 225.

60. Aldous Huxley, “Notes on Liberty and the Boundaries of the Promised Land,” in *Music at Night*, 116. After visiting the northern coal country in 1931, he wrote to a friend: “The human race fills me with a steadily growing dismay. . . . If only one could believe that the remedies proposed for the awfulness (Communism etc.) weren’t even worse than the disease. . . . The only thing to do is flee and hide.” Quoted by Bradshaw, “Introduction,” *Hidden Huxley*, xv.

61. Huxley, “Are We Growing Stupider?” 324.

had shown—convincingly for Huxley and his fellow eugenicists—that the socially and economically successful classes (professionals and artisans) were being “swamped” by the higher reproductive rates of the “mentally deficient.” His proposed remedy was positive eugenics: government should give financial incentives to encourage the “fit” to have more children. This was a widespread and uncontroversial policy proposal in the British and American eugenics movements. Where Huxley differed from many other British eugenicists, in both the mainline and reform camps, was in his aggressive stance on sterilization, in “What Is Happening to Our Population?”

This article addressed the problem of “mental deficiency,” following typical eugenic rhetoric about how social reforms and welfare measures had had the unintended effect of permitting the propagation of inferior genotypes. Hence the question of national efficiency needed to be tackled more “scientifically.” In a couple of hundred years “a quarter of the population of these islands will consist of half-wits. What a curiously squalid and humiliating conclusion to English history!” Positive measures were called for to foster larger families among the professional class (from which “so many outstandingly gifted individuals have sprung”), as well as negative eugenics to prevent the procreation of the unfit, who were categorized as both cognitively disabled and poor. “There is one simple, and, so far as it goes, effective way of limiting the multiplication of sub-normal stocks: certified defectives can be sterilized.”⁶²

The targeted group was the so-called “feeble-minded.” The 1913 Mental Deficiency Act had brought tens of thousands of lower-class “sub-normal” individuals under state supervision.⁶³ As a whole, the British eugenics movement emphasized permanent segregation as the simplest and most humane means of preventing the “social problem group” from propagating its bad heredity. Whereas compulsory sterilization laws had gone into effect in the United States as early as 1907, no such measures ever passed in Great Britain. Depression-era anxieties about the costs of caring for nonproductive, institutionalized persons led the Americans and Germans to accelerate their sterilization programs. By contrast, the British Eugenics Society’s response to the economic slump was to form committees (led by Julian Huxley among others) that investigated whether legalizing birth control and voluntary sterilization would be effective eugenic measures.⁶⁴ The ES never officially advocated *compulsory* sterilization. Aldous Huxley thought that his compatriots were being too timid about the sterilization solution (whether he was advocating voluntary or forced sterilization is unclear). He accused “mystical democrats” of opposing negative eugenics on the grounds of mistaken belief that nurture is

62. Huxley, “What Is Happening to Our Population?” 150 and 152.

63. Thomson, *The Problem of Mental Deficiency*, 1–9; John Radford, “Sterilization versus Segregation: Control of the Feeble-minded, 1900–1938,” *Social Science and Medicine* 33 (1991): 449–58.

64. Bradshaw, “Huxley’s Slump,” 165–68. On the Eugenics Society in the 1930s, see Richard A. Soloway, *Demography and Degeneration: Eugenics and the Declining Birthrate in Twentieth-Century Britain* (Chapel Hill: University of North Carolina Press, 1990), 193–225.

more important than nature, and that middle-class eugenicists were just trying to “bully the poor.”⁶⁵

During the 1930s, Huxley’s friend J. B. S. Haldane led a group of genetics experts in Britain and the United States who pursued “reform eugenics.”⁶⁶ While still advocating “rational policies for the guidance of reproduction” in order to cleanse the gene pool, the reformers criticized the sloppy Mendelian assumptions of the previous generation of eugenicists, acknowledged the role of environment as well as heredity in forming the individual, and showed that sterilization of the “unfit” could not in fact eliminate all defective genes.⁶⁷ They downplayed negative eugenics and most opposed sterilization because it was too likely to be misapplied to the poor and powerless members of society. The group favored leftist politics, even Marxism. Eugenic improvement could only occur, they maintained, in a socialist society with no economic barriers so that the genetic cream could rise to the top. They still assumed that intelligence was mostly an inherited trait and that only high-IQ people would have social success. Finally, they sharply criticized assumptions about biological differences between racial groups, and at least claimed to reject the idea of innate class differences as well.

For instance, Haldane in 1928 explained that the science of heredity and eugenics was being “misapplied” to legitimize “the political opinions of the extreme right.” Yet the rest of his analysis employed mainline, class-based eugenic notions about how “mental capacity is strongly hereditary,” “the unskilled workers are breeding much faster than the skilled classes,” and therefore modern civilization was in trouble “from the over-production of ‘undermen.’”⁶⁸ The reform eugenicists were principally concerned with breeding for intelligence, as was likewise emphasized in Huxley’s fictional community. They favored positive eugenics, such as education and propaganda methods to persuade superior individuals to have larger families. A striking example of reform eugenics was the scheme proposed in 1935 by the American geneticist H. J. Muller: he wanted to collect the sperm of the most intellectually and morally

65. Huxley, “What Is Happening to Our Population?” 154.

66. The Huxleys has been close friends at Oxford University in the 1910s with Haldane and his sister Naomi (Aldous even lived in the Haldane home for a time), and for years afterward they continued to discuss together scientific topics such as “mankind’s genetic improvement.” Fircchow, *End of Utopia*, 40–42 and 68–69.

67. The reform eugenicists’ political and scientific arguments against mainline eugenics are evaluated more fully by Mazumdar, *Eugenics, Human Genetics and Human Failings*, 146–95. Another useful overview of the ideas of this group is Diane Paul, “Eugenics and the Left,” in *The Politics of Heredity: Essays on Eugenics, Biomedicine, and the Nature-Nurture Debate* (Albany: SUNY Press, 1998), 11–36. Paul places them in the broader context of “biological utopians” in “Genetic Engineering and Eugenics: The Uses of History,” in *Is Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition*, eds. Harold Baillie and Timothy Casey (Cambridge: MIT Press, 2005), 123–51.

68. J. B. S. Haldane, *Possible Worlds, and Other Papers* (New York: Harper and Brothers, 1928), 200–6. He also popularized his ideas about how to carry out “good eugenics” in *Heredity and Politics* (London: George Allen and Unwin, 1938), and *What Is Life?* (New York: Boni and Gaer, 1947). Also see Ronald Clark, *J. B. S. The Life and Work of J. B. S. Haldane* (New York: Oxford University Press, 1968).

accomplished men in order to artificially inseminate as many women as possible.⁶⁹ The mind was elevated in an even more extreme fashion by another member of the group of leftist scientists, J. D. Bernal. In *The World, the Flesh, and the Devil* (1929), Bernal envisioned the culmination of the eugenics ideal: the perfection of mankind as cyborg. Brains would be placed directly into machines, creating “a ‘man’ who is perfect because he is freed from the sensory, motor, and biological constraints of the human body.” The socialist Bernal imagined that this future world would be organized by “an aristocracy of scientific intelligence,” and split into castes disturbingly comparable to Alphas and Epsilons: he called them “the altered and the non-altered humanity.”⁷⁰

Social class prejudice was always the predominant factor in British eugenics, and Huxley was clearly in the mainstream. Nothing united the diverse group of early-twentieth-century British eugenicists and other social reformers more than their shared attitude that the poor were a “race apart” from themselves. They sought to delineate “normal” citizens from the “social problem group” who were not capable of responsible citizenship—the most destitute members of the working classes who were identified as hereditary paupers, criminals, alcoholics, prostitutes, and physically and mentally disabled people. The “hidden Huxley” was a product of this prejudiced mindset. Following the meritocratic ideals of the eugenics movement as a whole, which valued the qualities of intelligence and self-control, his plan was to weed out the excess of “Epsilons” who lacked the rational capacity to participate in the democratic process.⁷¹

Science and Society

The fantastic biotechnologies envisioned by Bernal and Haldane obviously made a strong impression on Huxley as he was composing *Brave New World*. He borrowed heavily from Haldane’s 1923 *Daedalus, or Science and the Future*. In it, a student 150 years in the future sums up some of the radical advances in biology, most notably IVF “bottle babies” and artificial wombs, which came to be used as more effective methods of selective breeding:

69. Paul, “Eugenics and the Left,” 19. Muller’s scheme for “germinal choice” was endorsed by the scientists on the Left and by Aldous Huxley. Kevles, *In the Name of Eugenics*, 190–91 and 263.

70. Squier, *Babies in Bottles*, 86–89; Werskey, *Visible College*, 90–91. The full text of Bernal’s book is available at <http://www.cscs.umich.edu/~crshalizi/Bernal>.

71. Concerns about rights and democracy in the class-centered British eugenics movement, see Thomson, *Problem of Mental Deficiency*, 198–205. A similar argument could be made about race and citizenship in the American eugenics movement. The 1924 Immigration Restriction Act was based on scientific evidence of the supposed feeble-mindedness of southern and eastern European immigrants (as well as American blacks). A broader analysis of how the category “disability” has historically been used to legitimize the exclusion of “undesirable” groups (by class, race, and gender) is provided by Douglas Baynton, “Disability and the Justification of Inequality in American History,” in *The New Disability History: American Perspectives*, eds. Paul Longmore and Lauri Umansky (New York: New York University Press, 2001), 33–57.

It was in 1951 that Dupont and Schwarz produced the first ectogenetic child. . . . We can take an ovary from a woman, and keep it growing in a suitable fluid for as long as twenty years, producing a fresh ovum each month, of which 90 per cent can be fertilized, and the embryos grown successfully for nine months, and then brought out into the air. . . . The small proportion of men and women who are selected as ancestors for the next generation are so undoubtedly superior to the average. . . . Had it not been for ectogenesis there can be little doubt that civilization would have collapsed within a measurable time owing to the greater fertility of the less desirable members of the population in almost all countries.⁷²

The text of *Brave New World* is less explicit about the criteria for eugenic selection of eggs (or sperm), but the idea clearly came from Haldane. The opening scene of the novel very briefly explains that Deltas come from Delta ovaries, for example, and that “heredity” is labeled on the embryo bottles. The pre- and postnatal conditioning processes are described in much greater detail, which of course gave Huxley ample opportunities to poke fun at Freudian psychology and behaviorism. It is notable that despite his hereditarianism, Huxley gave so much weight to nurture in the techniques of social engineering: “Hasn’t it occurred to you that an Epsilon embryo must have an Epsilon environment as well as an Epsilon heredity?”⁷³ This was actually quite typical of most versions of eugenics, and especially fit the reform eugenics agenda of re-introducing a role for environment alongside heredity.

Daedalus and *Brave New World* both raise crucial questions about the social uses and control of science. Haldane celebrated the mythological Daedalus who designed the Minotaur yet was never punished by the gods. His moral was that scientific progress cannot be resisted. Huxley may have thought of his novel as a refutation of Haldane’s optimism. He continually challenged the real-life Daedaluses to justify their work in terms of how it contributed to making the world a better place. For example, his clever essay “Monks Among the Test Tubes” (1932) parodied those scientists who refused to take responsibility for the social consequences of their research:

The monks [of science] have a very enviable lot. They work for ends about whose value they feel no doubt. . . . If people beyond the convent walls choose to put the truth to stupid or destructive uses, then so much the worse for the world. It is none of the monks’ business.⁷⁴

72. Haldane, *Daedalus*, 63–67.

73. Huxley, *Brave New World*, 9–10 and 14. The “heredity” of the castes is also mentioned in passing on 74 and 222. In *Crome Yellow* (1921) Huxley had a character explain the idea of ectogenesis (gestation outside the womb) and outline a plan for making a “Rational State” based on “Directing Intelligences” who lead the “vast mass of the Herd.” Haldane had been playing with these scientific ideas since his undergraduate days. Huxley squeezed them into this early novel, but only in order to ridicule them. By contrast he was ready to take these ideas much more seriously in *Brave New World*. Fitchow, *End of Utopia*, 30–31.

74. Aldous Huxley, “Monks Among the Test Tubes,” *Hearst*, June 25, 1932, *Complete Essays*, vol. 3, 157–59. Julian Huxley, also a science popularizer when not researching evolutionary biology, published the short story “The Tissue-Culture King” in 1923. Its literary merits are negligible, but its message is perpetually relevant: the scientist protagonist “attained to an un-

In "Science and Civilisation," the essay closest to the themes of *Brave New World*, he explicitly addressed the questions "to what end," "by what means," and "who is to wield the power which science gives?" Given the lack of regulation of science in the past, and the harm that it has caused deliberately and inadvertently, "the only cure for science is more science, not less. We are suffering from the effects of a little science badly applied. The remedy is a lot of science, well applied."⁷⁵ The same message also appears in *Brave New World*, in the illicit history lessons delivered by Mustapha Mond near the beginning and end of the story. He explains that science had been responsible for destroying the old world through economic collapse and anthrax bombs, and afterwards an aristocracy of scientists came into power who managed to create a stable new world using the tools of genetics, psychology, and endocrinology.⁷⁶ What is the novel saying about ends and means? Does the goal of stability and happiness justify the methods of dictatorship and dehumanization?

Mond's answer is yes. There seemed no other choice. What did Huxley believe? He recognized that throughout history, crises and anarchy have forced people to accept tyrants and subjugation in return for security.⁷⁷ Perhaps a planned tyranny of the eugenically best over the worst was a more tolerable condition than either the "humanist's" ideal of a society of "malcontented" Alphas, or the "industrialist's" ideal of all "half-witted" Epsilons. At this point in his career Huxley could only offer a choice between evils: "any form of order is better than chaos."⁷⁸ As Bradshaw summed up the difficulties of interpreting *Brave New World*, the novel "embodies in an absurd and distorted form ideas and opinions that Huxley framed in earnest beyond the novel's satirical parameters."⁷⁹ At that moment in history, a "new caste system based on differences in natural ability" seemed relatively attractive.

Modern readers should therefore recognize *Brave New World* as more than just a straightforward denunciation or glorification of science. It offers a sophisticated critique of how scientific knowledge emerges from and in turn serves the social, political, and economic agendas of those in power. Huxley's fiction and nonfiction works exploring the relationship between science and society resemble not only the futuristic *Daedalus*, but also the pioneering Marxist texts in the history and sociology of science, including J. D. Bernal's *Social Function of Science* (1939) and Lancelot Hogben's *Science for the Citizen* (1938). Huxley's later science monographs continued to analyze the social uses of science, but reached quite different conclusions. Whereas in *Brave New World* and its associated essays he had seemed contented to permit rel-

surpassed power in a number of the applications of science—but to what end did all this power serve?" Turney, *Frankenstein's Footsteps*, 102–7.

75. Huxley, "Science and Civilisation," 106–7.

76. Huxley, *Brave New World*, 47–50 and 227–28.

77. Aldous Huxley, "Aristocratic Tradition," *Hearst*, December 31, 1932, *Complete Essays*, vol. 3, 352–53; *Science, Liberty, and Peace* (New York: Harper and Brothers, 1946), 23–25.

78. Huxley, "Science and Civilisation," 111.

79. Bradshaw, "Huxley's Slump," 168.

actively desirable ends (social stability) be achieved at high cost and by immoral means (eugenics, social control, dictatorship), in the later writings he developed a consistent theme that only the high road can lead to true happiness.⁸⁰ His analysis focused on how the capitalist powers who controlled science and technology were using them to destroy the environment, build more and more devastating weapons, and oppress the people through methods of mass production and mass persuasion. Thus the 1946 *Science, Liberty, and Peace* opened by quoting Tolstoy:

If the arrangement of society is bad (as ours is), and a small number of people have power over the majority and oppress it, every victory over Nature will inevitably serve only to increase that power and that oppression.⁸¹

Evidently the solution was to decentralize power and increase “liberty,” although Huxley still provided no program for political and economic change. Once skeptical of democracy, he now demanded political equality and a science for the people. In his final novel, *Island* (1962), he even chose to depict a genuine utopia founded on the principles of self-government and sustainable science. His call for public participation in science policymaking is as vital an issue today as it was in the tumultuous 1930s.

Re-reading *Brave New World* might also inspire more critical thinking about the nature of “eugenics” in the past and present day. Popular fiction exposes the general public to the history of eugenics, and thus it surely deserves richer explication. Other examples of eugenics in fiction are Bernard Shaw’s *Man and Superman* (1903), Wells’s *Modern Utopia* (1905), and Charlotte Perkins Gilman’s *Herland* (1915). Teaching about how progressive thinkers such as Huxley (known in his day as a socialist, humanist, pacifist, and eventually spiritualist), Shaw and Wells (Fabian Society supporters), and Gilman (socialist-feminist) were so supportive of policies for restricting the reproductive rights of the “socially inadequate” calls attention to the widespread popularity of the eugenics agenda across political and national boundaries.

By the late 1930s, European and American eugenicists began trying to distance themselves from the extremes of Nazi eugenic science, rhetoric, and action. On the one hand, the 1933 German sterilization law aroused envy owing to its comprehensiveness, and on the other, the Nazi racial ideology raised alarm bells. In 1936, Julian Huxley co-authored one of the first antiracist science tracts, *We Europeans*, and in 1950–51 he was involved with composing the UNESCO statements on race that refuted fascist abuses of science but affirmed the usefulness of racial typology for scientific research.⁸² In 1939, the reform eugenicists led by Haldane and Muller produced a “Geneticists’

80. In particular, Huxley, *Ends and Means* (1937). This was the first book Huxley finished after suffering some kind of breakdown and writer’s block in the mid-1930s.

81. Huxley, *Science, Liberty, and Peace*, 3. Similar themes are pursued in his last book, *Literature and Science* (New York: Harper and Row, 1963).

82. Jenny Reardon, *Race to the Finish: Identity and Governance in the Age of Genomics* (Princeton: Princeton University Press, 2005), 23–31.

Manifesto” that repudiated the idea of biological class and race hierarchies but maintained the goal of enhancing human hereditary traits.⁸³ Aldous Huxley’s style of eugenics is especially interesting because it encompassed elements of both the “mainline” hereditarian, pro-sterilization school and the “reform” antiracist, socialist, environmentalist school. There was no absolute delineation between the two camps, nor did the Nazi atrocities entirely discredit the goals or activities of the eugenics movement. Society’s privileged groups—including scientific and medical experts—carried on with passing judgments about desirable and undesirable qualities, and targeting for eugenic elimination those “others” who were differentiated by class, disability, and sometimes still race.

In Huxley’s case, his antidemocratic phase and infatuation with the planning and eugenics movements lasted only as long as the economic crisis; after 1935, there are only a few references to eugenics in his published and unpublished writing. Nonetheless, his ongoing interest in eugenics and citizenship is one thread that ties together the several phases of his career as a novelist and literary essayist. In his 1946 foreword to *Brave New World*, he noted that the prospect of a “foolproof eugenics” to engineer a standardized and contented working class might yet become a reality.⁸⁴ A long discussion lamenting the double demographic crises of overpopulation (a favored topic of eugenicists after the war) and differential class fertility appeared in 1950. He cited approvingly the work of the (now discredited) eugenicist and psychologist Cyril Burt, who calculated that by the end of the century average IQ would drop 5 points because the less-endowed lower classes were out-reproducing the fit.⁸⁵ And finally, the 1958 text *Brave New World Revisited* reiterated his interwar concerns about mental ability and democracy:

And what about the congenitally insufficient organisms, whom our medicine and our social services now preserve so that they may propagate their kind? . . . We are on the horns of an ethical dilemma, and to find the middle way will require all our intelligence and our good will.

As of 1958 he still wondered if the “well-fed television-watchers in the world’s most powerful democracy . . . perfectly content to be ruled, from above, by an oligarchy of assorted experts” had the brains and desire to shake themselves awake “in order to halt and, if possible, reverse the current drift toward totalitarian control.”⁸⁶

Revisited dates from late in Huxley’s life (he died on November 22, 1963), twenty years into the “religious philosopher” phase of his career. Yet his re-

83. “Men and Mice at Edinburgh,” *Journal of Heredity* 30 (1939): 371–74.

84. Huxley, *Brave New World*, xvi.

85. Huxley, “The Double Crisis,” 129. The Burt argument was also in some letters, such as Huxley to Julian Huxley, June 3, 1948, *Letters*, 582–83.

86. Huxley, *Brave New World Revisited*, 20 and 144–46.

turn to the subject matter of *Brave New World* shows that he held on to some of his youthful cynicism about the fate of free civilization, and that he considered it his life-long project to champion and critique the social uses of science, including eugenics. His work and interests were always many-sided. The late 1930s—when he befriended the science writer and spiritualist Gerald Heard and subsequently moved from Europe to California—did not represent an absolute turning point in his life, as many have contended. Contemporaries complained that Huxley had abandoned his rational and worldly interests in science and social criticism in order to throw himself entirely into the realms of spiritual enlightenment, Eastern religions, and mind-altering drugs. He lost much of his old audience and gained a new following as a counter-cultural figure. However, curiosity about the unknown spiritual world and the ultimate purpose of life was a constant throughout Huxley's career. It even appeared in the scientific society of *Brave New World* via the pious character John Savage, who debates the value of religion and suffering with the World Controller.⁸⁷ On the flip side, Huxley was forever fascinated by science and its methods, which even shaped how he undertook his mystical quest. He sought rational “evidence” for a transcendent reality by systematically studying religious and philosophical texts and experimenting with LSD.⁸⁸

In 1946, Aldous Huxley chastised his younger self as “the amused, Pyrrhonic aesthete who was the author of the fable” *Brave New World*.⁸⁹ By exaggerating the nihilistic elements of that early work, he was asserting the novelty of his more recent contributions. He felt that his writing was now directed towards constructive ends, particularly metaphysical methods and goals.⁹⁰ If he were to rewrite *Brave New World* today, he explained in the appended foreword, he would construct a utopian society based on the religious philosophy of achieving “man's Final End,” by which he meant some kind of transcendent unification. He now wished that he had given his characters a third option besides the World State and the primitive Reservation, namely to live in small, democratic, self-sustaining communities. Most significantly, he stated overtly the novel's implied critique of those in power who used science to further their own ends, rather than make the world a better place for everyone:

87. For Huxley's religious ideas, see especially Sawyer, *Aldous Huxley*. The scene between John and Mond in *Brave New World*, 230–40. In another revealing scene, Mond wistfully mentions a piece of biology research he had had to censor because it threatened his scientifically constructed status quo with a “heretical” revival of spiritual values. The biologist claimed to have discovered that happiness lay “somewhere beyond, somewhere outside the present human sphere; that the purpose of life was not the maintenance of well-being, but some intensification and refining of consciousness, some enlargement of knowledge” (177).

88. In effect, he “scientized mysticism,” as mysticism seemed to him the perfect religion for a scientific age. June Deery, *Aldous Huxley and the Mysticism of Science* (New York: St. Martin's Press, 1996), 8.

89. Huxley, *Brave New World*, viii.

90. The most famous of his metaphysical texts are *The Perennial Philosophy* (1945) and *The Doors of Perception* (1956).

Science and technology would be used as though, like the Sabbath, they had been made for man, not (as at present and still more so in the Brave New World) as though man were to be adapted and enslaved to them.⁹¹

By the later part of his career, Huxley had resolved that science cannot reveal ultimate reality or solve all the world's problems. Only love, mysticism, and meditation can lead the individual to fulfillment. He felt that he had effectively satisfied his life-long goal, as expressed by a character in *Point Counter Point* in 1928: "The problem for me is to transform a detached intellectual scepticism into a way of harmonious all-round living."⁹² As Huxley himself had explained in 1931, his job as a novelist and public intellectual was to discover his own "outlook on life," or in other words to explicate in artistic forms his solutions to pressing social, scientific, and moral problems:

My chief motive in writing has been the desire to clarify a point of view. . . . I am chiefly interested in making clear a certain outlook on life. . . . My books represent different stages in my progress towards such an outlook. Each book is an attempt to make things clear to myself so far as I had gone at the time it was written. In that sense they are all provisional.⁹³

Through his art and essays, he developed provisional solutions that ranged from being cynical about mankind's prospects during the 1920s, to favoring technocratic control over reproduction and social reform in the early 1930s, to achieving contentment in a personal mystical quest after 1937. *Brave New World* can be read as the product of both his nihilistic and eugenicist tendencies: while the despotic and soulless World State is certainly a nightmare, it is also a plausible solution to Huxley's observation that "half-wits fairly ask for dictators." The text reflects the broad popularity of eugenics ideology in that period, and illustrates the variety of Anglo-American approaches to the perceived problem of "mental deficiency" and the future of democracy. Eugenicists such as Huxley saw themselves as the "intellectual aristocracy" of Alphas. They were a separate caste from the masses of Epsilons, yet ultimately responsible for both keeping them contented and judging their fitness for citizenship. Emerging from Huxley's keen awareness of the socio-political dimensions of science, his story rings a warning bell about knowledge as power that is especially relevant now that the predicted genetic revolution has arrived. Even though genetics may not be in the hands of despots, the "monks of science" still ought to set down their test tubes once in a while and make it their business to engage in public dialogue about how their research will be put to use in society.

Huxley proclaimed himself uninterested in revisiting his finished novels of

91. Huxley, *Brave New World*, ix.

92. Quoted in Clive James, "Out of Sight: The Curious Career of Aldous Huxley," *The New Yorker*, March 17, 2003, *ProQuest*, University of Washington, April 11, 2007.

93. From an interview quoted in Bradshaw and Sexton, "Introduction," *Now More Than Ever*, xii. "The writing of FINIS at the end of a manuscript should be the equivalent of burning it." Quoted in Murray, *Aldous Huxley*, 163.

ideas, and presumably uninterested in public reaction to them (except for how well they sold). He would pen a work—express his outlook at that moment—and immediately move on to his next effort to discover “how must we live.” Yet in the case of *Brave New World* he felt compelled to ameliorate the flaws in his scientific society with new commentaries in 1946 (foreword) and 1958 (*Revisited*) and a fictional democratically controlled scientific utopia in 1962 (*Island*). Even for him, the meaning of his influential dystopian scenario was always evolving.

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